

WHITEPAPER

API Strategy Essentials

Content



Getting Started

Companies face many challenges in the ever-evolving digital landscape. Innovations arise, and customer demands shift – making delivering an excellent customer experience a moving target. And the reality is that many organizations will struggle to keep up due to the limitations of their digital estate and legacy systems.

To overcome this agility gap, companies must adopt a digital ecosystem that allows them to use data effectively and quickly to create powerful customer experiences. This white paper will provide a blueprint for adopting a customer-focused API-led approach that has enabled businesses to thrive in their markets.

At the core of this approach is the customer experience. For example, in an excellent in-flight experience, the airline could anticipate a frequent flier's meal choice and entertainment preferences before boarding the plane. The data to support this effort already exists within the airline's digital ecosystem. However, the airline's real challenge is aligning its food service, entertainment, and other partners around a highly personalized travel experience by processing data from different sources.

What is digital transformation?

Consider former retail titan Sears – their bankruptcy declaration in 2018 was largely due to their inability to compete with the digital-first retailer Amazon. While Sears saw itself as a brick-and-mortar-first retailer, Amazon used digitally-native thinking to create efficient moments online to streamline the customer experience and grow revenue across an ecosystem of internal and external stakeholders. Sears and other legacy retailers went wrong by focusing on balancing their online and physical shopping experiences rather than meeting customers where they were: online.

Today, Amazon dominates with a thriving digital ecosystem. Let's consider the full conversational capability of Amazon's Alexa technology used in their Echo brand of voice-enabled personal assistants. The Alexa technology is seamlessly reused as an on-demand service on non-Echo and non-Amazon products.

To achieve this, Amazon uses a standardized set of APIs to export Alexa's capabilities to an ecosystem of independent software developers, third-party device makers, and even Amazon's product offerings – like Fire Tablet and Fire TV. This standardization and reusability allow them to stay agile rather than rely on custom code that fails to scale and requires extensive maintenance.

So whether it's Amazon, Uber, or another industry leader, APIs are the digital building blocks that compose and orchestrate customer experiences, foster new partnerships, and drive revenue with new business models.

Digitally-native companies have blazed a trail for others to follow, and their success is primarily due to their well-publicized ecosystem of APIs. However, IT leaders face significant challenges when taming their current fragmented solutions and ecosystems to power a digital-first approach. To successfully shift to an API-led approach, leaders must follow best practices by executing essential change management steps and adjust the organization's mindset to align the digital platform and ecosystem to better participate in the API economy. While the process can seem daunting, MuleSoft is here to help.

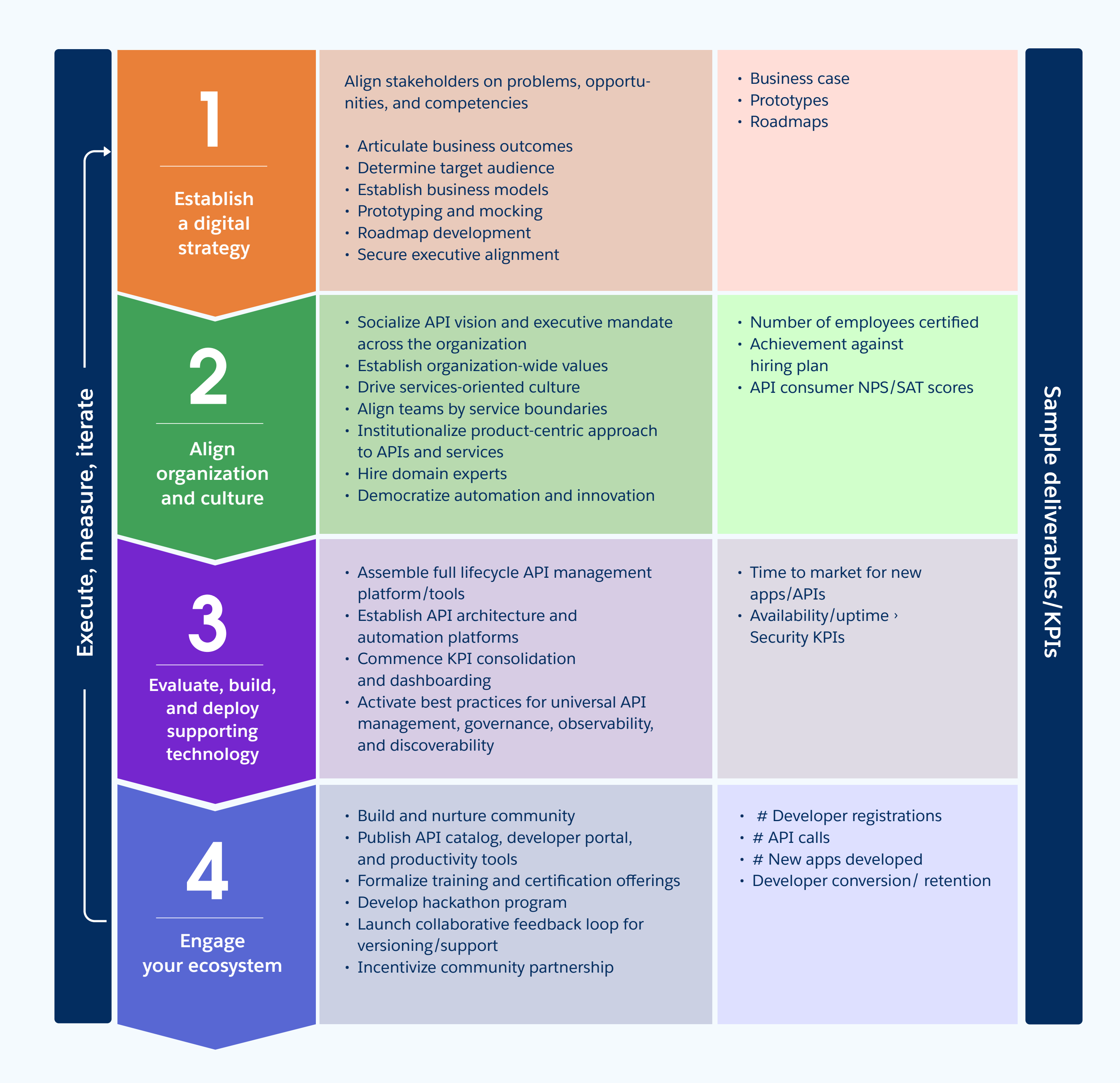


Start on the Path to Success

Based on MuleSoft's experience with more than 1,000 enterprise customers and first-hand knowledge of the capabilities of a unified API-led approach – this whitepaper provides you with a blueprint for developing your API strategy.

The API strategy blueprint consists of four stages. Each of these steps covers a critical business and technology building block:





This blueprint won't cover all the activities involved in developing an agile digital architecture. Nor will it touch on every bullet point across the blueprint in detail. Instead, the blueprint will focus on the most critical action items to frame API ecosystem development.

While there are four distinct stages, some activities will overlap. For example, as your organization engages with members of your ecosystem in one part of your digital strategy, new customer demands or the latest market conditions may cause other steps to still evolve in response.

1

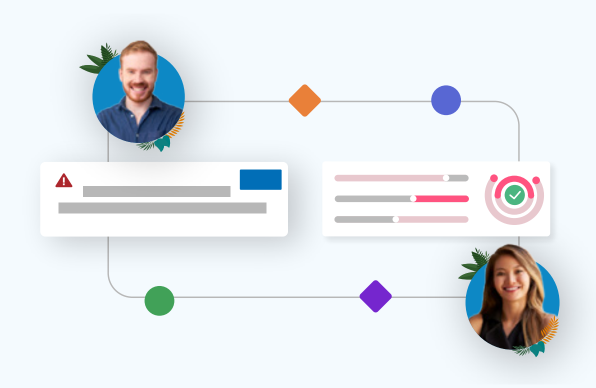
Establish a Digital Strategy

Establishing your digital strategy is the one stage in the API strategy blueprint critical to the rest's success. While the strategy will morph over time, it will serve as your north star for the other three stages. Creating a thriving API ecosystem will be nearly impossible without a well-defined and executive-backed digital strategy.

While you may want to engage external partners and customers, it's key to focus on your internal API ecosystem first. By developing APIs internally, businesses reduce the limitations of their legacy systems – transforming how they deliver digital products, services, and business capabilities.

Your organization's digital strategy development will be theoretical since it relies on digital instincts and creativity – which can pose a challenge for many organizations. One of the major challenges is that organizations struggle to develop realistic business outcomes (like building new customer experiences) based on platform and ecosystem thinking – since they have likely not done it before.

Being open-minded to calculated risk



is vital for the strategy development process. One of your first organizational

changes should involve working with experts with a history of game-changing platform business outcomes. This individual could be in a newly created position on the executive team, like a chief digital officer (CDO). Another option is to leverage a consultant with a proven track record of driving successful business transformations. The aim here is to develop a strategy free from the limitations of preconceived ideas of your current team.

Creating a new role sends a firm signal that significant changes are coming. Once key stakeholders (including business leaders and an experienced leader for the ecosystem development) are in position, the following steps are straightforward.



"Creating a new role sends a firm signal that significant changes are coming."

Identify Business Outcomes Early

Stakeholders should take notice of their key organizational competencies. They should also identify potential problem areas to help direct the digital strategy and establish business outcomes. Some real-world results that organizations have targeted include:

- → Accelerated delivery
- → Increased new product cadence (number of new products over a given year)
- → Revenue growth due to new products
- → Recurring subscription services
- → Better customer experiences
- → Improved partnerships
- → Increased transparency
- → Accurate and timely reporting
- → Optimized cash flow
- → Increased brand awareness
- → Faster recruiting cycles
- → Better situational awareness
- → Improved customer self-service
- → Backlog reduction





Siemens, the largest manufacturing and electronics company in Europe, was tasked with rolling out 60 million smart meters to accommodate the UK's new climate change regulations. The initiative required a solution that would adapt quickly, connect easily, and enable Siemens to execute its initiatives effectively without major disruptions.

Customer data had previously been stored in multiple mainframes, severely limiting their ability to provide industry-leading customer experiences.

The company used an API ecosystem with the smart meter project to unlock siloed services and data. This approach enabled mobile and web applications to consume the data, resulting in a superior partner and customer experience. The API ecosystem also allowed them to share data in real time with the UK regulatory bodies and removed the need for custom-generated reports.

Read More>

Target Identified: Audiences

Visualize the API ecosystem and identify internal and external participants. Let's look at an example with Salesforce: operating two business channels and models across a single ecosystem in the Lightning and AppExchange platforms. APIs power both and have access to the company's core business capabilities – Salesforce automation and customer relationship management. But the audiences using these platforms are different.

On Lightning, Salesforce targets both pro-coders and non-coders with the ability to customize their organization's access to Salesforce's core capabilities. Pro-coders include software developers looking to program new, customized user interfaces, while non-coders use a drag-and-drop experience to build customizations.

Whereas Salesforce AppExchange is a marketplace where independent software vendors (ISVs) can provide prebuilt solutions that complement the native Salesforce experience.

Additionally, AppExchange targets a different community of developers than the Lightning Platform. These technologies enable Salesforce customers to discover and procure turnkey solutions.

The Salesforce example shows that organizations need to understand each audience in their digital strategy. Identifying your target customers, researching their needs, and understanding their pain points will strengthen the foundation of your ecosystem and business models.

Correctly identifying your target audience will also help you develop customer experiences based on their needs. Doing so will drive the consumption of your organization's digital capabilities, which will guide and reinforce the value of the ecosystem. While it's important to leave room for innovation, most of your conceptual experiences will be the ones that deeply engage your constituents (customers, partners, and employees) and keep them coming back for more.

Ecosystems and business models need validation, too

The best ecosystems primarily focus on the value between the host and its ecosystem members. Like the Salesforce use case, the value could involve direct or indirect business models.

Salesforce earns a significant amount of revenue from customer subscriptions to core services. When Salesforce customers build their customizations using Lightning, those new applications enable their customers to be more successful. This approach is an example of an indirect model of API monetization. In contrast, a direct business model is when revenue is driven directly by the volume of API usage.

On another side of Salesforce's ecosystem, ISVs build-and-resell turnkey applications that rely on Salesforce APIs that complement their out-of-the-box capabilities with new experiences. This involves a different business model that includes AppExchange. In this model, value is co-created when ISVs earn revenue by driving increased usage and loyalty to Salesforce while earning from the sales of their solutions.

Organizing ecosystems that involve multiple business models is a massive undertaking. This is why having the right talent lead the process is crucial. It is equally important to validate your proposed ecosystems with all relevant constituencies (like customers and ISVs) that will co-create that value. Do not rely on internal stakeholders alone for validation since you may fall victim to echo chamber thinking. Working with individuals in your intended ecosystem will make it easier to discover flaws in your planning, evolve your offering, and eventually improve your bottom line.



"Do not rely on internal stakeholders alone for validation since you may fall victim to echo chamber thinking."



Prototyping and Mocking Service

After you whiteboard ideal customer experiences, you'll focus on creating a proof-of-concept and prototype. These can help stakeholders envision your digital strategy and any potential flaws. Look into an API management solution that offers mocking services that allow developers to design and build – even if APIs are not implemented.

Let's revisit the Siemens example and how they migrated from mainframes to an API-led ecosystem solution. The company developed a proof-of-concept to demonstrate that its mainframe could call a cloud-based service. Siemens used a mocking service to test its concept in a safe environment rather than a trial by fire on its live platform. Prototyping and mocking services allowed its leader to fully conceptualize and create a plan before prematurely jumping into a costly development phase.

Get on Board: Exploring Executive Backing

Ideally, your organization's leadership will act as key stakeholders and fully engage in strategic development. If not, proceed with caution. A strong-minded executive that isn't on board with an API ecosystem can impede the progress of a digital strategy.

To maximize success, ecosystem leaders must foster the energy and resources that come with executive backing. The executive sponsors need to know that the plan has been holistically conceived – with no stone left unturned to identify and validate business outcomes and opportunities. They must support the required financial investment and the duration of the journey. They must also reorganize the company, mandate behavioral changes, and fundamentally shift the culture.

Executing your company's new digital strategy will be an extensive endeavor – it will make the metaphor of turning a battleship look simple. To survive in the ever-changing digital landscape, organizations must reinvent themselves by:

- Freeing and shifting siloed data into 360-degree views of customers.
- Deputizing knowledge workers into no-code consumers of that data.
- Assembling incredible customer experiences.
- Increasing business agility.



Align Organization and Culture

1 2 3 4

Consider the last time you flew on a plane. You might have seen the airline's mobile app that provides travelers with access to the airline's business capabilities. The app includes several features: booking new travel, finding your gate and departure time, and accessing in-flight entertainment options.

Of course, an app like this is commonplace in today's API-connected world. Still, it was not too long ago that a proprietary seatback playback system was the standard across many airlines. This system was prone to failure, frequent updates, and a customer experience that gave customers little control.

The airline's app adds value to the digital strategy because it incentivizes travelers who might not otherwise download the app and create an account – resulting in a longer-term digital engagement opportunity for the airline. The airline can easily notify customers of revenue-driving offers or allow them to place in-flight food orders through their app. Additionally, the app gives the customer more control than the previous generation of technology, all from their device. Meanwhile, the airline is building a 360-degree view of the customer based on their app usage to provide a more personalized experience.

Consider the effort it takes across the organization to achieve the airline app's desired business outcomes. First, someone envisioned the mobile app as a new business channel to keep customers engaged while growing revenue. Then someone spotted the opportunity to drive app adoption further by turning the passenger's smartphone into an in-flight entertainment portal. Finally, as gate personnel and flight attendants inform passengers of this new experience, this ensures the passenger will install the app before take-off.

This type of organizational alignment and culture around new digital experiences does not happen by mistake. It occurs with enterprise-wide adoption of the digital vision that extends beyond the buy-in of the executive and management teams. The entire organization drove toward these outcomes beyond what was in the original digital strategy and created an excellent customer experience as a result.

In the blueprint's second stage, there are several organizational and cultural changes that every organization must consider:

API Vision for Everyone

Your digital strategy will require significant socialization to align the organizations to the same objectives and business outcomes.

The digital strategy and its associated API vision will:

→ Involve organizational changes

→ Focus on specific organizational values

→ Ask everyone to consider the value they can provide in service-oriented terms

→ Democratize innovation so that all can participate

When reinforcing the intention of the new strategy, consider positioning some of these internal changes as mandates. When an organization goes through multiple changes, it can be unsettling to employees previously operating under specific patterns. Open communication will prepare the team for the changes coming to the organization.

The vision and mandate should be communicated through town halls, online FAQs, newsletters, internal blogs, or email communications. The organization should also provide training and orientation programs to help employees take ownership of these changes.

Values Matter: Trust, Security, and Privacy

Trust is your customers' number one concern. Your product could offer the most comprehensive solution in the market, but without customer trust, you won't maintain widespread and sustainable adoption. The quickest way an organization loses trust is if its product or service exposes customers to security vulnerabilities – which can cause a significant loss in market share and revenue.

Malicious attackers prey on enterprises suffering from uncontrolled API sprawl. These hackers target API endpoints by finding gaps in their software and services. Up to 75% of credential abuse attacks target APIs. This means having a sprawl of ungoverned and unmanaged APIs across the enterprise is a dangerous risk. Creating an industry-leading API ecosystem sets your organization up for success, but it would be useless if it left its users open to vulnerabilities.

No technology is infallible, and every development of digital technology comes with some risks. With any technology that becomes commonplace, the impact of the technology far outweighs the risks of using them – and this is absolutely the case with APIs.

"With any technology that becomes commonplace, the impact of the technology far outweighs the risks of using them — and this is undoubtedly the case with APIs."



So while no digital or API security strategy is impenetrable, excellent digital security boils down to:

- → Relying on solutions and tools that are inherently secure by design
- → Complementary technologies that secure infrastructure tangential to API provisioning
- → Strictly enforcing best practices and management/governance standards while validating API design-time and runtime adherence
- → A security-first organizational culture obsessed with security, trust, and privacy

Consumers are aware of their data. They understand that digital privacy is a concern, which makes it critical that all conversations around digital strategy and execution are framed with the organization's vigilance regarding security, trust, and privacy. Ensure your organization hires a team specializing in API security to work towards a consistent and secure design culture.

Security is often seen as a necessary evil, but businesses must start reframing this by treating security as an enabler for growth. For this shift to happen, security and compliance measures must be consistently coded within each ecosystem component from the start and a single control plane. The first step to avoid being the next data breach headline is to ensure universal visibility of the organization's APIs to secure them at scale.



WHITEPAPER

Top 5 Security Best Practices

Customer trust is slow to build and quick to lose – one data breach is all it takes to potentially lose even the most loyal customer. Establish a comprehensive API security strategy with our guide.

Download now

Drive a services-oriented culture

Most organizations consist of departments that are responsible for their respective business capabilities. When developing an API strategy, these capabilities and competencies are reimagined as API-led digital services consumed across a network.

While some of these capabilities will be priorities in the digital strategy, the core competencies must be leveraged as reusable building blocks called packaged business capabilities. This approach shifts the focus away from building projects from the ground up to using composable building blocks that enable organizations to deliver experiences at the speed of customer demand. It will also depart from a system where capabilities and data are tied directly to other applications through non-standard, non-reusable, custom-built integrations.



“MuleSoft has repeatedly seen these custom-built integrations snowball into expensive monoliths that are difficult to maintain and nearly impossible to leverage in new opportunities.”



For example, imagine the complexity and specialized labor needed to maintain Siemens’ multiple mainframes and their integrations.

Executives leading the charge need to foster a cultural change – where the entire organization is held accountable for transforming its existing business capabilities into API-led services. This shift must ensure that all new capabilities are developed and aligned with the API-led approach.

AMAZON FACED THIS CHALLENGE HEAD-ON:



In 2002, Jeff Bezos knew he had to change the culture of his young company before it repeated the mistakes made by so many other enterprises. So, he mandated that all business functions across Amazon are required to be exposed over the network as reusable services. Without exception, all consumption of business functionality must be through those service offerings. This exposure across the network was so crucial to organizational value that he threatened to fire those that didn’t comply.

Even today, no new business capability at Amazon, internal or external consumption, can launch unless it’s a service. That service-oriented approach was baked into the culture of the entire company.

Set service boundaries

As organizations break down their monolithic architectures into modular packaged business capabilities (PCBs), organizations must identify limitations that will emerge around their services. Organizations need to align their teams to mirror these service boundaries with clear lines of responsibility and accountability for their financial and technical successes.

Adopt a product-centric approach

For your digital strategy to succeed, APIs should not be treated as cogs in the organization's technical engine, and your teams need to take those service offerings seriously. The teams must treat the APIs as full-fledged products regardless of whether their APIs are offered to internal consumers, external consumers, or both.

Typically when a company provides some product to its customers, it must:

- Be designed with the intended customer in mind
- Be governed to consistent quality, regardless of their origin or development platform
- Be packaged and marketed to attract targeted customers
- Provide the customer with a great experience that inspires confidence in the brand
- Be backed by guarantees that it will work as advertised
- Come with whatever support is necessary when customers have problems



When APIs are designed and resourced with these characteristics, the stage is set for long-term service, higher customer satisfaction, and ongoing engagement. Even if the product or service is never presented externally to partners or third-party developers, internal consumers will increase adoption as if it were from an outside vendor.

A product-centric approach will have notable impacts across the entire blueprint: from resourcing and staffing to technology selections to how you'll engage your ecosystem (including evangelism, training, and support). Additionally, this will prepare the organization to expose these services externally. We've repeatedly seen across organizations like Amazon that best practices indicate that services must be developed with the assumption that they will be published to your customers.

Leave it to the domain experts

While your company may have already onboarded a chief digital officer to lead this ecosystem journey, the organization may still lack the talent to handle these shifts. If the organization is dedicated to product-centricity, it must appropriately resource and staff its service offerings. Attempted shortcuts, particularly within specific domains like API security, could be disastrous.

Some roles need to be brought on earlier in their API journey. The initial focus should be adding a chief digital officer or equivalent, then API product managers, API developers, and API security specialists as the portfolio of APIs expand.

These roles do not have to be filled on a per-service basis, and there are a variety of configurations that will work. For example, one team might be responsible for multiple services and only need one API developer to support them. In comparison, a larger organization might need a central pool of API developers to preserve API development standards across the organization.



On the other hand, API product managers cannot be easily centralized into a pool. The API product manager is the liaison for ecosystem consumers and is responsible for securely provisioning the API. Their broader view connects desired business outcomes to KPIs while considering the intended customer experiences the organization aims to create.

While the organization will hire for many new roles, not every role will require a dedicated headcount. For example, the API developer may also have a hand in API evangelism and support in some organizations. In other organizations, the ecosystem might be large enough that a single API requires a team of evangelists to cover different geographic regions.



"The organization should bring API product managers, API developers, and API security specialists as the portfolio of APIs expands."



Innovation for One and All

When business capabilities are buried within a monolithic architecture that is accessible to a handful of people, these people become the gatekeeper of innovation. Frequently, the bottleneck is the "if it ain't broke, don't fix it" approach and a fear that any attempts to change something complicated will cause it to break. Another concern could be resources, headcount, and priorities, or potentially there is red tape in the way. Many organizations are reluctant to trust solutions developed by third-party vendors, which dramatically stifles innovation.

Democratization of innovation is a cultural issue, and the reasoning for this is three-fold:

1. Like service orientation, security, and product-centricity, the democratization of innovation must be a subtext to every digital initiative.

2. Which members across your ecosystem are participating in the innovation process? Once you've enabled your business capability, it's necessary to consider which of your constituents can develop value from it.

3. How will the organization foster the innovation process to make it an expected and regular part of corporate culture? The aim is that innovation will drive people to want to work for your organization or join your ecosystem. It isn't enough to open the system up for participation. It has to be a core part of the organization's culture to drive participation continually.



As organizations look to reinvent the digital economy, it's not enough to strategize, install some technology, and wait for the cash register to ring. Critical components like product-centricity, security, and innovation must be embedded in the foundation of your API strategy. Getting the culture right isn't just important – it's fundamental. Once your culture is on the right track, it's time to focus on the technology component.



Evaluate and Build Supporting Tech

1 2 3 4

With your digital strategy in place, and your organization's culture aligned with that strategy, you'll need the right technology to engage your ecosystem digitally.

It should be no surprise that APIs will be one of the critical enablers for your digital strategy. As you look to publish your business capabilities for consumption across your ecosystem, each of those capabilities will be facilitated by one or more APIs.

Similar to how Amazon has assembled a portfolio of APIs for Alexa, shopping, and cloud computing, your digital platform should consist of APIs that are easily discovered and consumed by the members of your ecosystem. These APIs result from existing capabilities and API-related explorations of new functionality that might lead to new business channels, business models, and products.

When an organization commits to a product-centric approach in providing APIs, it should also commit to the universal API management lifecycle – which consists of the following phases:

- Planning and initial design
- Test-driven development
- Flexible deployment
- Secure operation
- Governance and monetization
- Analysis and testing
- Developer engagement
- Versioning and retirement

The technical team will establish API architecture and standard API design principles used across the ecosystem. This is why addressing API-specific roles early in the process is essential. In addition, depending on how much your APIs will draw upon your organization's existing IT estate, other technical stakeholders like database administrators, system architects, and full-stack developers will also need to be a part of the process.

Your successful execution of the API lifecycle will depend on selecting and deploying a universal platform for API management. Many organizations are tempted to create an in-house API management solution from scratch. However, they quickly find that as they progress, they realize how integral the system's functionality must be under the hood.



"Universal API management enables developers to consume all of an organization's APIs through a single catalog. This management solution acts as the ecosystem's one-stop-shop single source of truth — regardless of which platform the APIs are developed on."

While your organization focuses on establishing an internal API ecosystem, data indicates that an API ecosystem will eventually encounter new APIs developed externally. A universal API management solution would allow your ecosystem to adopt quickly and incorporate these external APIs promptly and efficiently.

Security is another concern to consider for your API management solution, and at this stage, the ecosystem needs to activate security best practices and technologies. As said earlier, most well-known companies have experienced API security oversight. Organizations that attempt to create in-house solutions are virtually guaranteed to invite hackers in through the back door.

The reality is that organizations are no more suited to building their own API management solutions than they would be building their database management solutions or an in-house content management system. For this reason, it is critical to constantly test your security practices and technologies for potential issues, even enlisting your ecosystem for help using bug bounties as an incentive. Given the risks to your brand, API security is not something to take lightly.



ACCORDING TO GARTNER:

"Differentiation does not come from building your own API management platform. It comes from the APIs you publish … full lifecycle API management comprises a very wide set of functionality. At the start of API programs and digital strategies, clients need only a small subset of that … However, API programs and digital strategies quickly require more and more API management functions when they take off – far more quickly than any development shop can keep pace with."





Engaging Your Ecosystem

1 2 3 4

The API lifecycle's online engagement phase focuses on API management solutions' features like developer registration, documentation, and sample code. This stage of the API strategy blueprint focuses on forms of engagement and other activities that represent the totality of your ecosystem engagement efforts.

Each team that developed through the ecosystem journey will have its communication channels focusing on internal ecosystem constituents. One internal team may communicate through Slack and email distribution lists, while another might use Jira. Rather than dictate a standardized communication method, focus on engaging where your team members are most comfortable.

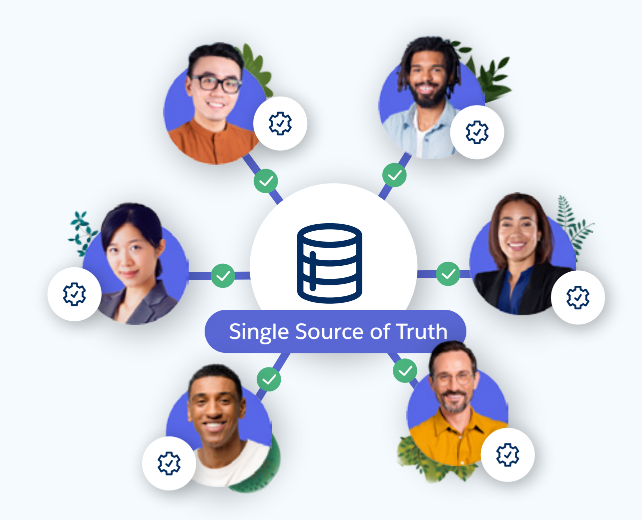
LET'S LOOK AT AN EXAMPLE OF A COMPANY ENGAGING WITH EXTERNAL CONSTITUENTS:

When it came time for Uber to support its APIs, the company could have built an in-house support forum and hosted them on Uber.com. Instead, Uber met its target audience where they were: on the forums at StackOverflow.com.

StackOverflow.com is a popular website where developers get expert help on nearly any programming topic. As Uber's community on StackOverflow grew, it became self-sufficient with members who didn't even work for Uber – as they began to answer support questions from other members. Recognizing this as a crucial part of its overall developer experience, Uber started gifting swag to volunteer mentors, generating goodwill and more interest in the Uber API.

Uber didn't attempt to force a community within its domain to grow web traffic or a branded community. Meeting the developers where they are still allowed them to connect with Uber API experts.

One Stop Shop: Create a Single Source of Truth for All APIs



The composable business has gained traction with business and IT executives over the last twenty years. At the same time, API adoption across every enterprise has also increased exponentially.

Modern enterprises use up to 500 APIs to drive composability, speed, and agility. Unfortunately, many of these enterprises adopted multiple fragmented solutions in their underlying technology stacks. Siloed teams with diverse architectures and disparate solutions for their different use cases led to API sprawl – the next big challenge for API-led businesses. With API sprawl, it is more complicated than ever for enterprises to know which APIs exist across the enterprise, let alone govern and secure them.

Future-looking organizations need a single source of truth that provides universal discovery, governance, management, and observability across their enterprise, regardless of their origin, environment, or architecture.

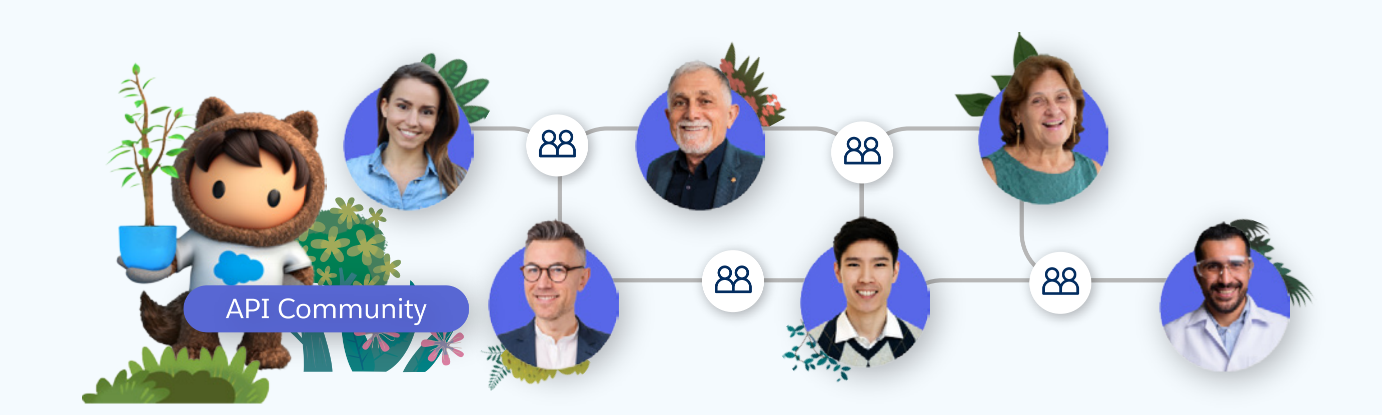
Let's Get Together: Build and Nurture Community

In this stage, evangelists will solely drive your platform's adoption and usage. Yet, regardless of whether the goal is to drive internal or external adoption, API and platform evangelism needs to be a full-time role, and each API must be treated as full-fledged products.

There are several ways to target members across your ecosystem, including traditional marketing, hackathons, swag, and bug bounties. An API and platform evangelist's job is to maximize the community of enthusiastic consumers about consuming your platform and APIs. And in turn, they represent the APIs to anyone within their community.

Hiring an API evangelist early on will expedite go-to-market decisions and jumpstart value co-creation across your ecosystem. Part of the API evangelist's job is to work with community members before launching an API to gauge the likelihood of adoption. If the members of your ecosystem don't see the API bringing ease and value toward meeting their goals, they may reject the offering. The API evangelist is the liaison to this community and is essential to the success of your APIs – and ultimately, your business goals.

Another problem enterprises need help with is bringing together their API community. The biggest hurdle in this process requires a single source of truth for the organization's APIs. The benefit is that having a single consolidated repository for APIs makes it easy for API evangelists to promote your products and build brand loyalty.

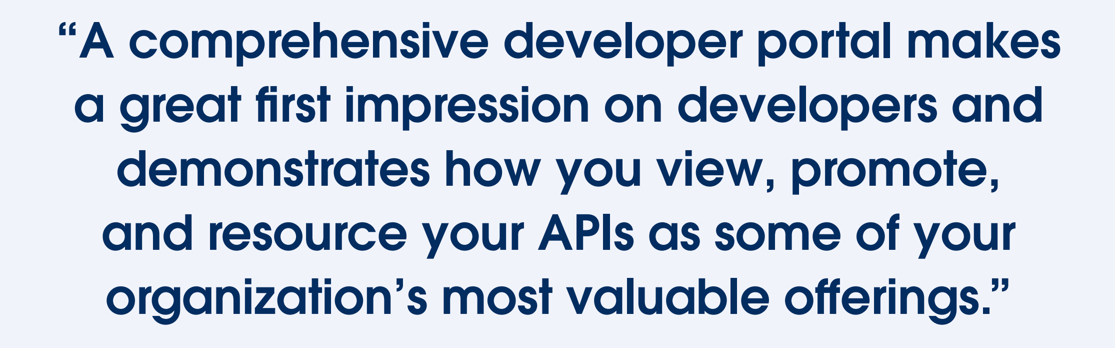


Help Them Help You

A developer portal is the communication channel between your organization and your API community. Whether a public website or an internal portal, it should be a one-stop shop for developers to discover everything about your platform and APIs. In addition to housing technical documentation, the developer portal has the resources needed to enable developers to use the APIs. This can include but is not limited to:

- → Searchable and browsable API catalog
- → API overviews with business capabilities, typical use cases, and terms of availability
- → Self-service registration
- → Technical documentation
- → Sample commands and code snippets
- → Interactive API console
- → Access to SDKs
- → Sandbox versions and version navigator
- → Change log
- → Blogs and news about your API
- → Support forums

Beyond these functions, the platform that is used to build a developer portal should have ready-to-use templates to get up and running quickly. Finally, a comprehensive developer portal makes a great first impression on developers and demonstrates how you view, promote, and resource your APIs as some of your organization's most valuable offerings.



Get Into it: Time for a Training Program

Establishing a training program should be one of the key targets of your evangelism efforts. Training content and materials inform evangelists and prevent mistakes across the organization.

Example code is a fundamental training content that educates software developers on using their preferred programming language with their APIs. In addition, this training code allows developers to familiarize themselves with your APIs to cut, paste, and experiment with that sample code in their programming environments rather than building them from scratch. Consider implementing step-by-step tutorials to guide developers through example business problems with programming code that uses your APIs. These tutorials can be published through a content management system like WordPress leading to programming code maintained in repositories like Github.com. Here the evangelists can connect with developers to answer questions left in the comments.

Think beyond text-based tutorials and embrace video tutorials, live and on-demand webinars, or in-person training at conferences. Some organizations add a certification to their training programs for developers who have proven to be proficient with the platform. Often these certifications are shared on social media, which is an excellent opportunity for evangelism created outside the scope of the dedicated evangelist.

There is a range of options for your training offerings, some of which are better suited to specific members of your ecosystem. Focus on what makes the most sense with your initiatives and for the ecosystem's members.

I'm In: Establishing a Hackathon

Hackathons are one of the most popular forms of ecosystem engagement. During a hackathon, software developers build new experiences with the business capabilities offered by your platform via APIs. In addition, hackathons are sometimes contests where the concept and execution of the contributor determines the winner.

Hackathon participants are often internal members of the platform team and developers from across an organization. They will break away from their usual

tasks for a day of highly-collaborative interaction – hopefully resulting in key takeaways for both groups. For example, the platform team may get feedback about the design of an API, while new possibilities might inspire developers.

Hackathons also democratize innovation. The entries surface previously unimagined ideas that could turn into business initiatives.

For platform providers, hackathons are an opportunity to discover where developers might struggle with specific APIs. For example, you may find that the API's resources could be more consistent or that developers must spend significant time with the documentation or in trial-and-error mode.

For hackathons to be effective, they must be something other than one-time events. They must be scheduled regularly and be an everyday part of your organization's culture.



BLOG

Everything you need to know about API strategy.

Read more

Is this thing on? Importance of a Feedback Loop

In the early days of API development, some API providers would launch one version of an API. Then without any adequate warning, they'd either change its programming structure or replace it with a new, improved one.

Many API providers learned the hard way that making sudden changes to their APIs was bad for business. Once existing applications rely on an API, changes must occur openly with feedback or risk causing those applications to malfunction. Across the API economy, this unwelcome phenomenon is known as a breaking change.

Regarding the co-creation of value, the better approach is to overlap versions so that developers can test the new functionality in their apps while also providing feedback on the latest versions (i.e., bug reports). This feedback can happen on online forums, comments on blogs and docs, Slack and email, or similar communication tools. When you send the message to your community that you're open and welcome to feedback, you let developers know you value their insight.

Connect to Your Community

In a successful API ecosystem, there is a co-creation of value between your organization and its community members. This co-creation of value occurs in several ways, one of the most popular being bug bounties, where individuals earn rewards for identifying flaws within a system. Yet surprisingly, many API providers do not do this.

Digitally-native industry leaders and companies committed to creating an ecosystem with collaborative feedback compensate with cash or recognition. Take Google, for example – the company paid a developer who discovered a catastrophic API security vulnerability within a YouTube API, making it possible for hackers to delete any YouTube video.

Cash or recognition is a small price for connecting with the community, especially compared to the time and energy it would cost the company to uncover such an error. Rewards like this establish good faith with your community and potential customers.

The community can also get involved by developing open-source SDKs for languages your team is unfamiliar with. For example, the GitHub public code repository has thousands of SDKs from independent developers (compared to the API providers themselves). An API provider might choose not to build SDKs for less popular languages, like Clojure or Haskell, and incentivize its developer community to make them instead.



Invest in yourself

Creating a new API ecosystem will involve restructuring, increased headcount, and more working hours – which means business leaders must understand that it's impossible to estimate the total cost upfront. On the flip side, it is equally absurd to head in to develop an API ecosystem with a blank check. There needs to be ongoing conversations and planning across the four stages of this blueprint regarding financial expectations, expenditures, and ROI.

Use this blueprint to shape the financial conversation into compartmentalized discussions, where the cost of each step will be tracked to its goals and outcomes. For example, while you build organizational culture, the team can identify domain experts you hope to recruit while you also create the budgets.

However, as you move into tech enablement, you must budget for different expenses. These choices, costs, and savings will be unique to your organization's goals and intention for the ecosystems. So for example, the engagement expenses involved in a public API economy differ from a private offering that stays within the corporate firewalls or partners.

Recording and mapping expenses into a dashboard that offers a global view of the ongoing budget, expenses, savings, and ROI for the journey.

What does success look like anyway?

The success of your platform also depends on setting objectives for the four stages of the API strategy blueprint and rigorously measuring and monitoring progress. This roadmap offers some examples of KPIs for each step, but it is by no means a comprehensive list. It falls on the organization leaders to determine which KPIs will measure the API ecosystem's success.

Each stage will have distinct goals and KPIs unique to the organization. The KPI identification, goal-setting, and goal recalibration exercises should be revisited by stakeholders frequently. While the API strategy blueprint looks like a waterfall-like model, the activities within constantly build on each other. Your digital strategy will evolve in response to successes and failures, shifting market conditions,

competition, and customer requirements. As your digital strategy develops, so will the measures of digital strategy success.

The rest of the development is limited if the organization doesn't enable rigorous KPI monitoring at the beginning of the journey. Lax KPI monitoring also conveys to the organization that accountability is not part of the process. If an organization is diligent at setting and communicating goals, the entire organization will culturally become a part of the process.

Such goals should involve well-understood measurements (i.e., number of developer registrations, API requests, and revenue) and identify and automate the connections between business and technological metrics. While it's not listed as a discreet action item in the technology stage of this blueprint, forging these connections is an integral part of the measurement and testing phase of the API lifecycle. This opportunity is your chance to tie technical and business metrics together and may reveal new opportunities or the need to recalibrate a business model.

EXAMPLE SCENARIO

Let's say a fictitious airline waits until passengers have boarded their flights before encouraging them to download a mobile application. At the same time, everyone is seated at the gate with free WiFi. As a result, that airline's API metrics (available from the API management platform) might reflect low usage, which correlates to the number of installations of that mobile app.

Once gate personnel suggests downloading the app while passengers wait at the gate, the airline's metrics improve, including in-flight food and premium entertainment purchases (whose revenue is stored in the accounting system).

Aggregating these metrics from their respective sources into a single view makes it possible to correlate specific business outcomes and technical metrics to shape your digital strategy.

Conclusion and Next Steps



These four stages provide a framework to begin developing your API strategy but are by no means exhaustive. The customer experience is the keystone to your ecosystem strategy and should be kept in mind as your organization moves forward through the four steps.

Regardless of where your organization is within the API strategy journey, universal API management through Anypoint Platform can help. This solution increases agility, improves governance, and delivers innovations quickly.

Learn How MuleSoft Can Elevate Your API Strategy



API

Adopt a trusted platform for API management

Learn how Anypoint Platform can help your team quickly design, test, and publish API products, including those developed outside MuleSoft.

Get connected

WEBINAR

Universal API management on Anypoint Platform

Universal API management on Anypoint Platform lets you manage and secure any API, built and deployed anywhere.

Watch webinar





WEBINAR

Anypoint Platform 101

Discover how to connect applications, data, and devices in the cloud, on-premises, and hybrid environments.

Watch webinar

WHITEPAPER

Top 5 API Security Best Practices

Customer trust is slow to build and quick to lose – one data breach is all it takes to potentially lose even the most loyal customer.

Explore whitepaper





REPORT

Analyst Report

Gartner names MuleSoft as a Leader in 2022 Magic Quadrant for API Management

Get the free report





Salesforce, the global CRM leader, empowers companies of every size and industry to digitally transform and create a 360° view of their customers. For more information about Salesforce (NYSE: CRM), visit Salesforce.com.

Any unreleased services or features referenced in this or other press releases or public statements are not currently available and may not be delivered on time or at all. Customers who purchase Salesforce applications should make their purchase decisions based upon features that are currently available. Salesforce has headquarters in San Francisco, with offices in Europe and Asia, and trades on the New York Stock Exchange under the ticker symbol "CRM".

For more information please visit Salesforce.com, or call 1-800-No-Software.